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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/199,655 11/25/98 MATHIES

R 71180-024827

IM22/0522
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EXAMINER

BEX, P

ART UNIT

PAPER NUMBER

1743

DATE MAILED:

05/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/199,655

Applicant(s)

MATHIES ET AL.

Examiner

P. K. Bex

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1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,9-13 and 36-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,9-13 and 36-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 1998 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

1. The cancellation of claims 14-35 and the addition of claims 36-39 is acknowledged and has been entered into the record.

Continued Prosecution Application

2. The request filed on February 28, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/199,655 is acceptable and a CPA has been established. An action on the CPA follows.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show *every* feature of the invention specified in the claims. Therefore, the liquid-handling system comprising...a reservoir having at least two capillaries, including the deposit of two or more solutions to be mixed and removal of a resulting mixture by an *additional capillary* as recited in claim 40. This limitation must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. There is no figure which disclose a third capillary which removes solution from a reservoir.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 6, 37 and 40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 6, line 3-4, recite "wherein at least one capillary tube transfers liquid between said plurality of first and second containers". This limitation is not supported by the instant specification, same deficiency was found in claims 37 and 40. The specification does support a *manifold* having a set of reservoirs or containers, see page 8, lines 24-27.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-3, 6, 9-13, 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 7, recites "the tube", it is confusing and indefinite as to which of the at least *two* capillary tubes Applicant is referring to. Moreover, this claim does not disclose at least two capillaries which are both positioned at the bottom of the first container, and which both terminate at or above the second container. Same deficiency was found in claims 6, 9 which recite the use of a tube of a single capillary.

Same line, the term "near" is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "near" renders the distance of the first end of the tube from the bottom of the first container indefinite. Same deficiency was found in claims 37 and 40.

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Last line, recite the limitation, "wherein the pressure-altering device applies a pressure differential that transfers liquids in either direction from a container having two or more capillaries"; this limitation is unclear as to what *structural* limitation is intended because it recites an *intended use* and has not been given patentable weight. Moreover, is this "container" different from the previously recited "first" or "second" container?

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-3, 6, 9-13 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (WO 97/34138).

Wilson teaches a system for the bi-directional (page 6, line 19-23) transferring of liquid comprising; a first container comprising a plurality of reservoirs 70, a housing 30 encasing the first container in a pressure-tight manner. Wilson teach a plurality of capillary tubes 34 having a

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predetermined length and diameter, wherein a first end 36 of the tube is positioned near the bottom of at least one of the reservoirs of the first container and the distal end 38 of the capillary extends at or above a plurality of destination wells 21 of a second container. Moreover, the liquid contained is transferred through the capillary tube to the second container when a pressure gradient or difference is applied via an electric pump, pressurized gas cylinder or any other source of gas pressure (page 5, line 29- page 14, line 22). Wilson does not explicitly teach a computer-controlled pressure-altering device attached to the housing in a pressure-tight manner, that changes the pressure within the housing relative to the pressure outside the housing. However, such a control means is considered conventional in the art and usually required in large-scale liquid transfer systems.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the liquid transfer apparatus of Wilson, a computer-controlled pressure-altering device in order to allow for the transfer the liquid samples automatically and to ensure that a correct pressure is generated and therefore an accurate amount of liquid sample dispensed. Further, it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

11. Claims 1-3, 6, 9-13 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Citrin (USP 4,342,407).

Citrin teach a liquid transfer device comprising a first container 24 comprising a plurality of reservoirs 25, a housing 27 encasing the first container in a pressure-tight manner. Citrin teach a plurality of capillary tubes 41, 48 having a predetermined length and diameter, wherein a

first end of the tube is positioned near the bottom of at least one of the reservoirs of the first container (Fig. 1) and the distal end of the capillary extends at or above a plurality of destination wells of a second container 50. Moreover, the liquid contained is transferred through the capillary tube to the second container when a pressure gradient or difference is applied via pressurized air cylinder (column 2 lines 33-36). Citrin does not explicitly teach a computer-controlled pressure-altering device attached to the housing in a pressure-tight manner, that changes the pressure within the housing relative to the pressure outside the housing. However, such a control means is considered conventional in the art and usually required in large-scale liquid transfer systems.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the liquid transfer apparatus of Citrin, a computer-controlled pressure-altering device in order to allow for the transfer the liquid samples automatically and to ensure that a correct pressure is generated and therefore an accurate amount of liquid sample dispensed. Further, it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

Conclusion

12. No claims allowed.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are Adourian et al., Balch, Takahashi et al., Bevan et al. Dovich et al. and Tarnopolsky for the teaching of a liquid-handling system for transferring liquid from at least one container to a second container.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.



P. Kathryn Bex
Patent Examiner
Group Art Unit 1743
August 21, 2000



Jill Warden
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